

What is claimed is:

A

1. A method for providing location-based information for a wireless device, the method comprising:
 - 5 receiving a message from said wireless device via a wireless network;
 - determining whether the received message contains a request for location-based information;
 - determining the location of said wireless device using 10 said wireless network if the received message is determined to contain the request;
 - retrieving location-based information related to the determined location; and
 - transmitting the location-based information to said 15 wireless device via said wireless network.
2. The method of claim 1 further comprising:
 - verifying a user of said wireless device prior to retrieving location-based information to said wireless 20 device.
3. The method of claim 2 wherein said verifying comprises:
 - determining whether the user of said wireless device is listed in a user database.
- 25 4. The method of claim 1 wherein said location-based information comprises a location of at least one entity within a region containing of said wireless device.
- 30 5. The method of claim 4 wherein said location-based information comprises the location of at least one of gas

stations, hotels, cinema, automobile repair facilities, department stores and emergency services.

6. The method of claim 1 wherein said received message
5 comprises an electronic mail message.

7. The method of claim 1 wherein said determining of the received message comprises:

10 identifying whether the received message contains a pre-defined character string; and

determining the received message as a request for location-based information if the pre-defined character string is identified in the received message.

15 8. The method of claim 7 wherein the pre-defined character string is located in at least one of a header, a TO: field, a CC: field, or a body of the received message.

9. The method of claim 7 wherein the pre-defined character string is in one of a text format and a binary format.

10. The method of claim 1 wherein the determining of the received message is automatically identified as a request for location-based information.

25

11. The method of claim 1 wherein the determining the location comprises:

obtaining the location of said wireless device as determined by a wireless communications system of said 30 wireless network.

12. The method of claim 1 wherein said determining the location comprises:

determining the location of a communications tower previously receiving a wireless signal from said wireless device.

13. The method of claim 1 wherein said determining the location comprises:

determining the location using at least one of time of arrival information, field strength values and global positioning system information.

14. The method of claim 1 wherein the determining the location comprises:

determining the location of at least two communications towers previously receiving a wireless signal from said wireless device; and

calculating the location of said wireless device from the locations of the least two communications towers.

20

15. The method of claim 14 wherein the calculating comprises:

averaging the location of the at least two communications towers.

25

16. The method of claim 14 wherein the calculating comprises:

determining the maximum likelihood of the location of the at least two communications towers.

30

A
17. A method for providing a location of a wireless device, the method comprising:

receiving a message from a sending device utilized by a first user;

5 determining whether the received message contains a request for the location of said wireless device carried by a second user;

determining the location of said wireless device using a wireless communications system if the received message is 10 determined to contain the request;

retrieving location-based information representative of the determined location; and

transmitting the location-based information to the first user.

15

18. The method of claim 17 wherein said received message is provided from at least one of a wireless network, an internet, and a Plain Old Telephone System (POTS).

20

19. The method of claim 17 further comprising:

verifying whether the first user has permission to obtain the location of the second user carrying said wireless device.

25

20. The method of claim 17 wherein the location-based information comprises a map of the location of said wireless device carried by the second user.

21. The method of claim 17 wherein said received message

30 comprises an electronic mail message.

22. The method of claim 21 wherein said determining of the received message comprises:

identifying whether the received message contains a pre-defined character string; and

5 determining the received message as a request for the location of said wireless device if the pre-defined character string is identified in the received message.

23. The method of claim 21 wherein the pre-defined character 10 string is located in at least one of a header, a TO: field, a CC: field, or a body of the received message.

24. The method of claim 21 wherein the pre-defined character string is in one of a text format and a binary format.

15 25. The method of claim 17 wherein said determining the location comprises:

transmitting a query signal to said wireless device, where said query signal causes said wireless device to 20 respond with a response signal; and

receiving said response signal from said wireless device, where said response signal is configured to include the location of said wireless device.

25 26. The method of claim 17 wherein said determining the location comprises:

determining the location of a communications tower previously receiving a wireless signal from said wireless device.

27. The method of claim 17 wherein said determining the location comprises:

determining the location using at least one of time of arrival information, field strength values and global positioning system information.

28. The method of claim 17 wherein the determining the location comprises:

determining the location of at least two communications towers previously receiving a wireless signal from said wireless device; and

calculating the location of said wireless device from the locations of the least two communications towers.

15 29. The method of claim 28 wherein the calculating comprises:

averaging the location of the at least two communications towers.

20 30. The method of claim 28 wherein the calculating comprises:

determining the maximum likelihood of the location of the at least two communications towers.

25 31. An apparatus for providing location-based information of a wireless device, the apparatus comprising:

a central processing unit (CPU), for processing a message received at support circuits, determining whether the received message contains a request for location-based information, determining the location of said wireless device using a wireless communications system, and retrieving

location-based information related to the identified location;

support circuits, coupled to said CPU and a wireless communications system, for receiving the message,

5 transmitting location-based information to one of said wireless device and a message sending device other than said wireless device; and

10 a memory, coupled to said CPU, for storing a program that, when executed by the CPU, causes the CPU to perform said processing, said determining of the received message, said determining of the location of said wireless device, and said retrieving.

32. The apparatus of claim 31 wherein said CPU further
15 verifies a user sending the request message to a user database.

33. The apparatus of claim 31 wherein said CPU retrieves location-based information from a map database.

20 34. The apparatus of claim 31 wherein said CPU receives of at least one of the request for location-based information and operating information from said message sending device using a network.

25 35. The apparatus of claim 34 wherein said network comprises at least one of a wireless network, an internet, and a Plain Old Telephone System (POTS).

36. The apparatus of claim 31 wherein said CPU configures a reply message containing location-based information retrieved from a map database.

5 37. The apparatus of claim 36 wherein the reply message further contains operating information retrieved from a data retrieval system.

10 38. The apparatus of claim 31 wherein said wireless device comprises at least one of a two-way pager, a personal digital assistant (PDA) and a cellular telephone.

15 39. The apparatus of claim 31 wherein said support circuits operate as a Transmission Control Protocol/Internet Protocol (TCP/IP) interface.

20 40. The apparatus of claim 31 further comprising:
a wireless communications system controller, coupled to said support circuit, for determining the location of said wireless device.

41. The apparatus of claim 31 wherein said request message is sent from said wireless device.

25 42. The apparatus of claim 31 wherein said request message is sent from said message sending device to request a map containing the location of said wireless device.

30 43. The apparatus of claim 31 wherein said location-based information comprises the location of at least one of gas

stations, hotels, cinema, automobile repair facilities, department stores and emergency services.

44. The apparatus of claim 31 wherein said location-base information comprises a map of an area surrounding said wireless device.